

### **REMARKS**

This Application has been carefully reviewed in light of the Office Action dated May 22, 2007 (“*Office Action*”). At the time of the *Office Action*, Claims 1-28 were pending in the Application. In the *Office Action*, the Examiner rejects Claims 1-28. Applicant amends Claims 1, 8-14, and 18. As described below, Applicant believes all claims to be allowable over the cited references. Therefore, Applicant respectfully requests reconsideration and full allowance of all pending claims.

### **Claim Objections**

The Examiner objects to Claims 1-21 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Specifically, with regard to independent Claims 1, 8, 13, 14, and 18, the Examiner states that the claims “fail to produce a useful and tangible result.” (*Office Action*, pages 2-4). With regard to Claim 18, the Examiner also states that “the claim lacks the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 U.S.C. § 101.” (*Office Action*, page 4). Although Applicant believes that all previously pending claims recite statutory subject matter under § 101, to advance this case expeditiously to issuance, Applicant has amended independent Claims 1, 8, 13, 14, and 18. For example, Claim 1 has been amended to recite “searching the rows of the second table to identify a particular one of the plurality of data components” and “returning the given data entry from the first table that includes the particular one of the plurality of data components.” Thus, instead of constituting nonstatutory subject matter, Claim 1 produces a useful, concrete, and tangible result. “Returning the given data entry” is one such tangible result. Likewise, independent Claims 8, 13, 14, and 18 also produce useful, concrete, and tangible results and are directed to statutory subject matter for substantially similar reasons. Additionally, independent Claim 18 has been amended to recite “a database” and “a data manager in communication with the database.” Thus, Claim 18 recites physical articles or objects to constitute statutory subject matter within the meaning of 35 U.S.C. § 101.

For at least these reasons, Applicant respectfully requests that the rejection of the Claims 1-21 under § 101 be withdrawn and the claims allowed.

### **Section 103 Rejections**

The Examiner rejects Claims 1-12, 14-17, and 22-28 under 35 U.S.C. § 103(a) as being unpatentable over C.M.R. Leung, “An object-oriented approach to directory systems,” 1990, pages 736-740 (“*Leung*”) in view of J. Rumbaugh et al., “Object-Oriented Modeling and Design,” 1991, pages 366-396 (“*Rumbaugh*”). Although not explicitly stated on page 5 of the *Office Action*, the Examiner also rejects Claims 13 and 18-21 under 35 U.S.C. § 103(a) as being unpatentable over the proposed *Leung-Rumbaugh* combination. Applicant respectfully requests reconsideration of these rejections for the reasons stated below.

#### **A. The Claims are Allowable over the *Leung-Rumbaugh* Combination**

Independent Claim 22 of the present application recites a first table and a second table. The second table is related to the first table in that the second table includes “one row for each of the plurality of data components of the given data entry of the first table.” Claim 22 further recites “determining a component of a given data entry of a **first table**” and “identifying a component identifier indicating a data type that is associated with the component of the **first table**.” The component identifier is the used “to execute one of an exact or initial matching on a column of a **second table in order to locate the component in the second table**.” Finally, Claim 22 recites “returning the given data entry from the **first table** matching the component located.” This combination of features and operations is not disclosed, taught, or suggested in the proposed *Leung-Rumbaugh* combination of elements recited in Applicant’s Claim 22.

In the *Office Action*, the Examiner identifies *Leung* as disclosing Applicant’s recited operational steps. As previously noted by Applicant, *Leung* merely discloses an object-oriented database consisting of two objects “the DIT and ENTRY, stored as two relational tables,” which are illustrated in Figure 6. (*Leung*, page 739, column 1,

paragraph 1; *id.* at Figure 6). *Leung*'s DIT table "holds the information of the structure of the DIT." (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). In the DIT table, each entry occupies one row and contains "the system identifier of an object, that of its parent, and its RDN." (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). The ENTRY table, on the other hand, includes detailed information about each directory object. (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6). In the ENTRY table, each row contains "the system identifier of [a directory] object, and an attribute value of an attribute type of the object in both normalized and raw forms." (*Leung*, page 739, column 1, paragraph 1; *id.* at Figure 6).

In the *Office Action*, the Examiner points to the DIT table as teaching the claimed "first table" and to the ENTRY table as teaching the claimed "second table." (*Office Action*, pages 9-10). Applicant respectfully submits, however, that *Leung* does not disclose, teach, or suggest performing operations on the DIT and ENTRY tables in a manner analogous to the steps of Applicant's claims. Specifically, there is no disclosure in *Leung* of "using the component identifier indicating the data type to execute one of an exact or initial matching **on a column of a second table in order to locate the component in the second table**" and "returning the given data entry **from the first table** matching the component located," as recited in Applicant's Claim 22.

With respect to the DIT and ENTRY tables, *Leung* discloses a number of operations that may be performed on each. For example, operations that may be performed on the DIT include DitNavigate, DitAdd, DitRemove, DitChildren, DitParent, DitSubtree, and DitModifyRdn. (*Leung*, page 739, column 1, paragraph 2). Operations that may be performed on the ENTRY include Read, Add, Remove, Modify, ModifyRDN, Compare, GETRdn, and Search. (*Leung*, page 739, column 1, paragraph 2). Based on the descriptions of each of these operations, the operations performed on the DIT table are isolated to the DIT table, and operations performed on the ENTRY table are isolated to the ENTRY table. There are no indications from *Leung* that the operations relating to the DIT and ENTRY tables are interrelated. For example, with respect to a "Search" operation

performed on the ENTRY table, *Leung* discloses that the “Search” operation results in the return of “details of ENTRYs which satisfied the specified filter (search conditions) within the specified search domain (a list of system identifiers o objects to be searched).” (*Leung*, page 739, column 1, paragraph 2). As such, the “Search” operation to be performed on the ENTRY table as disclosed in *Leung* may not be used to identify an entry in the DIT table. For at least these reasons, *Leung* cannot be said to disclose, teach, or suggest “using the component identifier indicating the data type to execute one of an exact or initial matching **on a column of a second table in order to locate the component in the second table**” and “returning the given data entry **from the first table** matching the component located,” as recited in Applicant’s Claim 22.

As another example of the deficiencies of the proposed *Leung-Rumbaugh* combination, Applicant respectfully submits that the cited references do not disclose, teach, or suggest “the second table comprising one row for each of the plurality of data components of the given data entry of the first table,” as recited in Applicant’s Claim 22. With respect to independent Claim 22, the Examiner has not explicitly identified in the *Office Action* any reference that discloses the recited claim language. Applicant assumes that this omission was inadvertent and notes the Examiner’s reliance on *Rumbaugh* for disclosure of similar features recited in Applicant’s independent Claim 1. (*Office Action*, pages 5-6).

To the extent that the Examiner relies upon *Rumbaugh*, Applicant disagrees with the Examiner’s conclusion that *Rumbaugh* discloses “the second table comprising one row for each of the plurality of data components of the given data entry of the first table,” as recited in Applicant’s Claim 22. Rather, *Rumbaugh* merely discloses “how to translate object models into DBMS code.” (*Rumbaugh*, page 368, paragraph 2; page 374, paragraph 5). According to the process disclosed in *Rumbaugh*, “you should formulate object models for the external and conceptual schema. Then, you should translate each object model to ideal tables, that is, the table model.” (*Rumbaugh*, page 373, paragraph 2). In the *Office Action*, the Examiner points to figure 17.12 as disclosing Applicant’s claimed

step. However, Figure 17.12 merely describes that an object model is translated into a table model, which is then translated into SQL code. (*Rumbaugh*, page 381, Figure 17.12; page 380, paragraphs 1-6). Similarly, Figure 17.13 illustrates an object model (for a qualified association), and Figure 17.14 illustrates the translation of the object model of Figure 17.13 into a table model. However, an object model is not analogous to Applicant's "first table" since an object model is not a table at all. Accordingly, since the table model of *Rumbaugh* is formed from an object model and an object model is not analogous to a table, the table model of *Rumbaugh* cannot be said to be analogous to "the second table comprising one row for each of the plurality of data components of the given data entry of the first table," as recited in Claim 22.

For at least these reasons, Applicant requests reconsideration and allowance of Claim 22, together with Claims 23-28 that depend on Claim 22.

The Examiner also relies on the proposed *Leung-Rumbaugh* combination to reject independent Claims 1, 13, 14, and 18. Applicant respectfully submits, however, that the proposed *Leung-Rumbaugh* combination does not disclose, teach, or suggest each and every element of Applicant's independent Claims 1 and 14. As one example, Claim 1 recites a first table and a second table and requires a relationship between the two tables such that "the second table compris[es] one row for each of the plurality of data components of the data entry of the first table." Claim 1 also recites "searching the rows of the second table to identify a particular one of the plurality of data components" and "returning the given data entry from the first table that includes the particular one of the plurality of data components." Claim 14 recites certain analogous features and operations. As another example, Claim 13 recites first, second, and third tables and requires that the third table is "configured to have one row for each component of each of the one or more values of the second table." Claim 13 also recites a data manager operable to "search the rows of the third table to identify a particular one of the data components" and "return the given object from the second table that includes the particular one of the plurality of data components." Claim 18 recites certain analogous features and operations. Thus, for

reasons similar to those discussed above with regard to Claim 22, Applicant respectfully submits that the proposed *Leung-Rumbaugh* combination does not disclose, teach, or suggest each and every element set forth in Applicant's independent Claims 1, 13, 14, and 18.

For at least these reasons, Applicant respectfully requests reconsideration and allowance of Claims 1, 13, 14, and 18, together with Claims 2-7, 15-17, and 19-21 which depend from Claims 1, 14, and 18, respectively.

**B. The Proposed Combinations are Improper.**

The M.P.E.P. sets forth the strict legal standard for establishing a *prima facie* case of obviousness based on modification or combination of prior art references. “To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references where combined) must teach or suggest all the claim limitations.” M.P.E.P. § 2142, 2143. The teaching, suggestion or motivation for the modification or combination and the reasonable expectation of success must both be found in the prior art and cannot be based on an Applicant’s disclosure. *See id.* (citations omitted). “Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art” at the time of the invention. M.P.E.P. § 2143.01. Even the fact that references *can* be modified or combined does not render the resultant modification or combination obvious unless the prior art teaches or suggests the desirability of the modification or combination. *See id.* (citations omitted).

The governing Federal Circuit case law makes this strict legal standard even more clear.<sup>1</sup> According to the Federal Circuit, “a showing of a suggestion, teaching, or motivation to combine or modify prior art references is an essential component of an obviousness holding.” *In re Sang-Su Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433 (Fed. Cir. 2002) (quoting *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d 1456, 1459 (Fed. Cir. 2000)). “Evidence of a suggestion, teaching, or motivation . . . may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved.” *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). However, the “range of sources available . . . does not diminish the requirement for actual evidence.” *Id.* Even a determination that it would have been obvious to one of ordinary skill in the art at the time of the invention to try the proposed modification or combination is not sufficient to establish a *prima facie* case of obviousness. *See In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1599 (Fed. Cir. 1988).

In addition, the M.P.E.P. and the Federal Circuit repeatedly warn against using an applicant’s disclosure as a blueprint to reconstruct the claimed invention. For example, the M.P.E.P. states, “The tendency to resort to ‘hindsight’ based upon applicant’s disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.” M.P.E.P. § 2142. The governing Federal Circuit cases are equally clear. “A critical step in analyzing the patentability of claims pursuant to [35 U.S.C. § 103] is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. . . . Close adherence to this methodology is especially important in cases where the very ease with which the invention

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<sup>1</sup> Note M.P.E.P. 2145 X.C. (“The Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references.”).

can be understood may prompt one ‘to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher.’” *In re Kotzab*, 217 F.3d 1365, 1369, 55 U.S.P.Q.2d 1313, 1316 (Fed. Cir. 2000) (citations omitted). In *In re Kotzab*, the Federal Circuit noted that to prevent the use of hindsight based on the invention to defeat patentability of the invention, the court requires the Examiner to show a motivation to combine the references that create the case of obviousness. *See id.* *See also, e.g., Grain Processing Corp. v. American Maize-Products*, 840 F.2d 902, 907, 5 U.S.P.Q.2d 1788, 1792 (Fed. Cir. 1988). Similarly, in *In re Dembiczak*, the Federal Circuit reversed a finding of obviousness by the Board, explaining that the required evidence of such a teaching, suggestion, or motivation is essential to avoid impermissible hindsight reconstruction of an applicant’s invention:

Our case law makes clear that the best defense against the subtle but powerful attraction of hind-sight obviousness analysis is *rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references*. Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.

175 F.3d at 999, 50 U.S.P.Q.2d at 1617 (emphasis added) (citations omitted).

In the *Office Action*, the Examiner acknowledges, with regard to Claim 1, that *Leung* does not disclose creating a second table storing data components and having one row for each component of the data. (*Office Action*, page 5). In maintaining the rejection, the Examiner speculates:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of *Leung* by creating a second table storing data components and having one row for each component of the data as disclosed by *Rumbaugh* (see *Rumbaugh* Fig. 17.2, page 370, paragraph 17.2.3 and Fig. 17.16) . . . to provide an excellent basis for modeling object oriented data base management system (DBMS) (see *Rumbaugh* page 388, paragraph 17.5), therefore, improving the performance of the directory searching methods and system.

(*Office Action*, page 6). With respect to Claims 13 and 18, the Examiner also speculates:



It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Leung by a third table directed to one or more selected components of the one or more values of the second table and configured to have one for each component of each of the one or more values as disclosed by Rumbaugh. . . to provide an excellent basis for modeling object oriented data base management system (DBMS) (see Rumbaugh page 388, paragraph 17.5), therefore, improving the performance of the directory searching methods and system.

(Office Action, page 9).

It appears that the Examiner has merely proposed alleged advantages of combining *Leung* with *Rumbaugh* (advantages which Applicant does not admit could even be achieved by combining these references in the manner the Examiner proposes). While the Examiner has cited a portion of *Rumbaugh* that touts an advantage of its techniques, the cited advantage does not explain why one of ordinary skill in the art would have been motivated to combine the DIT and ENTRY tables disclosed in *Leung* with the method for translating an object model into a table model as disclosed in *Rumbaugh*. Specifically, the alleged advantage of the system disclosed in *Ordille* does not provide an explanation as to: (1) why it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention (*without using Applicant's claims as a guide*) to modify the particular techniques disclosed in *Leung* with the cited disclosure of *Rumbaugh*; (2) how one of ordinary skill in the art at the time of Applicant's invention would have actually done so; and (3) how doing so would purportedly meet the limitations of Applicant's claims.

Indeed, if it were sufficient for Examiners to merely point to a purported advantage of one reference and conclude that it would have been obvious to combine or modify that reference with other references simply based on that advantage (which, as should be evident from the case law discussed above, it certainly is not), then virtually any two or more references would be combinable just based on the fact the one reference states an advantage of its system. Of course, as the Federal Circuit has made clear and as discussed above, that is not the law. Accordingly, Applicant respectfully submits that the

Examiner's conclusions set forth in the Office Action do not meet the requirements set forth in the M.P.E.P. and the governing Federal Circuit case law for demonstrating a *prima facie* case of obviousness.

Furthermore, it is improper for an Examiner to use hindsight having read the Applicant's disclosure to arrive at an obviousness rejection. *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). It is improper to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). It is clear based at least on the many distinctions discussed above that the proposed *Leung-Rumbaugh* combination does not, taken as a whole, suggest the claimed invention, taken as a whole. Rather, Applicant respectfully submits that the Examiner has merely pieced together disjointed portions of references, with the benefit of hindsight using Applicant's claims as a blueprint, in an attempt to reconstruct Applicant's claims.

For at least these reasons, Applicant submits that the rejection of Claims 1-28 is improper. Applicant respectfully requests reconsideration and allowance of Claims 1-28.

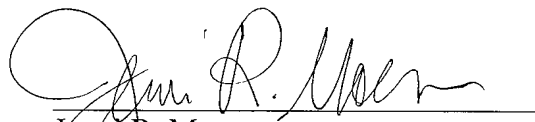
**CONCLUSION**

Applicant has made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicant respectfully requests full allowance of all pending claims.

If the Examiner feels that a telephone conference would advance prosecution of this Application in any manner, the Examiner is invited to contact Jenni R. Moen, Attorney for Applicant, at the Examiner's convenience at (214) 953-6809.

Applicant believes that no fees are due. However, the Commissioner is hereby authorized to charge any fees or credit any overpayment to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,  
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